

Information and Instructions about the CBA Mouse Vasculature Atlas Files

This directory contains the following files pertaining to mouse vasculature atlas:

- cba_mri_volume.mnc - this is the average MRI volume of five cba mice brains.
- cba_ct_volume.mnc - this is the high resolution CT volume of one cba mouse brain.
- cba_vasculature_labels.mnc - this the label file for vasculature
- cba_brain_labels.mnc - this is the label file for brain structures
- mouse_vasculature_atlas_key.pdf - this is the key to all labels in the minc file
- Readme - Information and instruction file

These images are in minc file format and can be loaded in MNI Display software available freely from the McConnell Brain Imaging Centre at the Montreal Neurological Institute

Website: <http://www.bic.mni.mcgill.ca/software>

Note that the vasculature labels were painted using the CT and MRI volume simultaneously. The resolution of the CT volume is much higher than the MR volume. Both are needed to appreciate the anatomical location of the blood vessels. In order to view these files properly, please follow the directions below:

1. Load MR and CT volume simultaneously using the following command:

```
Display cba_mri_volume.mnc cba_ct_volume.mnc
```

The CT is the only thing seen when display loads because the CT lies on top of the MR.

2. In order to see the MR image below, change the under color to transparent:

- a. In Display (Top Level), go into the 'Colour Coding menu (D)'
- b. Click on 'Under Color (Z)' where default colour is black
- c. Type 'transparent' in the command line window

Note: The color coding of the CT is the same as the MR, and it is hard to visually separate the two.

- d. In order to visualize the CT scan, while in Colour Coding menu, change the color from Hot metal to a solitary color.

Note: I chose green because it's the clearest when the MR is set to the default hot metal.

3. To load the vasculature labels:

- a. In Display (Top Level), go to 'File (T)'
- b. Click on 'Load Labels.mnc (Q)'
- c. Type the label file name 'cba_vasculature_labels.mnc' in the command window

4. To load the brain labels:

- a. In Display (Top Level), go to 'Slice View (S)'
- b. Click on 'Current Volume', so that it switches from '2' to '1'
- c. While the Current Volume is '1', load brain labels (cba_brain_labels.mnc) file using the steps described above in 3.

Note: Current Volume 1 is the MR volume on which the brain labels are painted. Current Volume 2 is the CT volume on which the vasculature labels are painted. It is helpful to switch the MR labels off using from the Top level Display, 'Segmenting menu (F)' and 'Show Labels: off (B)' option, from time to time when viewing the CT labels as the colors are similar for both label files.

Use + and – keys on the right side of the keyboard to go up and down the slices.

Have fun!

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